

VOLATILITY REPORT

AS REQUIRED BY LB33 (2015)

VOLATILE:

Characterized by or subject to rapid or unexpected change (a volatile market).

Merriam-Webster.com. Merriam-Webster, n.d. Web. 31 Oct. 2016.

From the text of LB33:

Section 1. (1) On November 15, 2016, the Legislative Fiscal Analyst shall prepare and electronically submit a revenue volatility report to the Appropriations Committee of the Legislature. Every two years thereafter the Legislative Fiscal Analyst shall prepare a revenue volatility report to append to the annual report required under section 77-2715.01. The report shall also be posted on the Legislature's web site.

Introduction

Examining revenue volatility as it pertains to Nebraska's General Fund revenue stream conceivably could be approached several different ways, such as (1) year over year change in relation to change in some other benchmark, such as change in personal income, wages and salaries or agricultural income—which would fundamentally be an examination of driver variables to a revenue forecasting effort. Or another approach could attempt to (2) disaggregate year over year change in revenue into other components such as changes driven by law (rate and base changes) at the state and federal level as distinguished from an assessment of natural growth due to economic (as noted above), and demographic (population) changes.

However, when viewing the statutory direction for this report, the focus is on assessing the role of the Cash Reserve fund to meet changing conditions for General Fund revenue and budget stability. Specifically, the law states (emphasis added):

(2) The report shall:

(a) Evaluate the tax base and the tax revenue volatility of revenue streams that provide funding for the state General Fund budget;

b) Identify federal funding included in the state budget and any projected changes in the amount or value of federal funding or potential areas in which federal funding could be lost;

(c) Identify current and projected balances of the Cash Reserve Fund;

(d) Analyze the adequacy of current and projected balances of the Cash Reserve Fund in relation to the tax revenue volatility and the risk of a reduction in the amount or value of federal funding or potential areas in which federal funding could be lost;

(e) Include revenue projections for the ensuing two fiscal years included in the impending biennial budget; and

(f) Contain any other recommendations that the Legislative Fiscal Analyst determines are necessary.

The emphasis on interaction with the Cash Reserve Fund thus becomes the focus of this report.

What follows will address each of these items as set forth in the law.

Evaluate the tax base and the tax revenue volatility of revenue streams that provide funding for the state General Fund budget;

Volatility, in part, is defined as characteristic of rapid or unexpected change. In this case, unexpected change can be thought of as results at variance to expectations, and in this specific context, revenue results at variance to expectations (forecasts). Any variability can translate in to financial stress (revenue underperforms), or opportunity (revenue exceeds expectations).

Nebraska's state budget process has a useful benchmark in evaluating stress or opportunity—revenue estimates in place for the next fiscal year are defined as a “certified estimate” a determination of the Tax Commissioner and the Legislative Fiscal Analyst. The certified estimate is the sum of the most recent official forecast for the General Fund prior to the end of the legislative session, plus or minus legislation enacted, (state and federal) that would add or subtract to that forecast. Practically speaking,

when budget decisions are made final during a session, revenue estimates used to balance are generated about 14 months prior to the end of the fiscal year. Since forecasts and the budget process is a multi-year exercise, any certified forecast is a baseline for subsequent years, and actual results drive periodic forecast revisions that flow forward into the next year or biennium providing the baseline for the next certification for a new fiscal year.

Table 1 displays revenue results for the years listed, as compared to “certified” or “budget based” estimates, actual net receipts and variances. The table also includes results “as if” FY2016-17 has been completed, with revenue performance identical to the difference between the year’s certified estimate and the Forecasting Board’s revision of October 2016. Most revealing is the clustering of errors, a series of underestimates, followed by a grouping of over estimates. These serial events correlation illustrate how year to year revenue forecasts tend to not rapidly adjust to inflection points (adjust to a changing trend), and perhaps, to some extent reflect a cyclical (business?) pattern.

Though based on a limited number of observations, the consequence of the clustering and average errors of year ahead forecasts provide useful insights for assessing volatility in the state revenue stream.

In simplest terms, if average errors of years where revenue exceeds forecast are at or above 4% (the “Under Error” column) and likewise, negative errors have averaged around 4% (the “Over Error column), it becomes clear that saving excesses in the former case could offset revenue shortages in the latter case.

Assuming the risk is a revenue decline were to occur over a four year period, averaging 4% per year, a Cash Reserve Fund balance of 16% of projected revenue in the fiscal year is a desirable objective to reach as the state enters in to the early stages of the revenue shortfall cycle. In current terms, this would equate to at least \$680 million, and, assuming revenue still grows through the next 3 years, conceivably over \$700 million would be a desirable level to help manage the expenditure/revenue budget and mitigate the difficulty in doing so.

The selection of a four year period is somewhat arbitrary, but since 1990-91 there have been two cycles of persistent negative forecast errors of four years and one cycle of less than two years, though that period was deeper in terms of the percentage error in each of the two years. The most current revenue error, an overestimate, and the subsequent lowering of the current fiscal year forecast suggests a new cycle of underperforming revenue results may be beginning—whether a short or long cycle remains to be seen.

Additional tables for each of the four major tax types (net receipts) may be found in the appendix. Though each have their own respective patterns of error, generally there is congruence with the overall total net receipt pattern discussed in this section.

TABLE 1 CONSENSUS "ONE YEAR AHEAD" FORECASTS

FISCAL YEAR	ACTUAL NET 000'S of \$'s	BUDBASE OR CERTIFIED FORECAST	VARIANCE FROM FORECAST	FORECAST ERROR	ABSOLUTE VALUE OF ERROR	OVER ERROR	UNDER ERROR
FY84-85	783,351	834,300	(50,949)	-6.1%	6.1%	-6.1%	
FY85-86	834,236	903,100	(68,864)	-7.6%	7.6%	-7.6%	
FY86-87	886,354	878,121	8,233	0.9%	0.9%		0.9%
FY87-88	1,016,098	924,000	92,098	10.0%	10.0%		10.0%
FY88-89	1,133,447	988,437	145,010	14.7%	14.7%		14.7%
FY89-90	1,152,709	1,110,883	41,826	3.8%	3.8%		3.8%
FY90-91	1,367,078	1,334,600	32,478	2.4%	2.4%		2.4%
FY91-92	1,490,409	1,493,227	(2,818)	-0.2%	0.2%	-0.2%	
FY92-93	1,524,662	1,537,987	(13,325)	-0.9%	0.9%	-0.9%	
FY93-94	1,653,753	1,662,548	(8,795)	-0.5%	0.5%	-0.5%	
FY94-95	1,705,490	1,729,901	(24,411)	-1.4%	1.4%	-1.4%	
FY95-96	1,836,731	1,834,289	2,442	0.1%	0.1%		0.1%
FY96-97	2,009,604	1,917,984	91,620	4.8%	4.8%		4.8%
FY97-98	2,105,451	1,993,835	111,616	5.6%	5.6%		5.6%
FY98-99	2,123,837	2,102,910	20,927	1.0%	1.0%		1.0%
FY99-00	2,403,924	2,326,348	77,576	3.3%	3.3%		3.3%
FY00-01	2,456,862	2,480,701	(23,839)	-1.0%	1.0%	-1.0%	
FY01-02	2,365,509	2,631,848	(266,339)	-10.1%	10.1%	-10.1%	
FY02-03	2,456,400	2,723,377	(266,977)	-9.8%	9.8%	-9.8%	
FY03-04	2,718,726	2,731,975	(13,249)	-0.5%	0.5%	-0.5%	
FY04-05	3,037,194	2,775,479	261,715	9.4%	9.4%		9.4%
FY05-06	3,352,188	3,092,258	259,930	8.4%	8.4%		8.4%
FY06-07	3,408,331	3,216,895	191,436	6.0%	6.0%		6.0%
FY07-08	3,506,163	3,389,186	116,977	3.5%	3.5%		3.5%
FY08-09	3,357,468	3,531,746	(174,278)	-4.9%	4.9%	-4.9%	
FY09-10	3,204,680	3,446,675	(241,995)	-7.0%	7.0%	-7.0%	
FY10-11	3,499,655	3,421,459	78,196	2.3%	2.3%		2.3%
FY11-12	3,695,888	3,591,099	104,789	2.9%	2.9%		2.9%
FY12-13	4,052,358	3,767,066	285,292	7.6%	7.6%		7.6%
FY13-14	4,117,408	4,020,687	96,721	2.4%	2.4%		2.4%
FY14-15	4,305,100	4,220,500	84,600	2.0%	2.0%		2.0%
FY15-16	4,307,981	4,473,856	(165,875)	-3.7%	3.7%	-3.7%	
FY16-17e	4,395,000	4,567,238	(172,238)	-3.8%	3.8%	-3.8%	
	Std Dev			5.7%	3.6%		
	Median			1.0%	3.7%		
	AVG ERROR 84-85 TO 16-17			1.0%	4.5%	-4.1	4.8

█ =budget special session year (CY1985, 1986, 1992, 2001, 2002, 2009)
e=estimated

Identify federal funding included in the state budget and any projected changes in the amount or value of federal funding or potential areas in which federal funding could be lost;

Table 2 summarizes federal fund expenditures since 2005-06 by functional categories and by agency/functional category description.

Each segment of the table is sorted from largest to smallest expenditure volume.

By far, the largest function/agency is Human Resources/DHHS (Health and Human Services System), which primarily is comprised of Medicaid expenditures.

Medicaid is a state federal partnership whereas the fund mix between the two is largely driven by the FMAP, which is the calculated ration of cost share between a state and the federal government. The formula is driven by average personal income growth in a state in relation to other states, with the end result where, if a state's personal income performs better in relation to that of other states, then that state will see a decreasing cost share from the federal program. Though not the only driver of volatility, (medical cost factors, eligibility and participation rates are relevant), changes in the FMAP are very significant. Fortunately means exist to project such changes in advance of finalizing budgets, thus adjustments can usually be readily made.

Higher Education/University segments are primarily Pell Grants and direct grants for research. K-12 Education/Dept of Education are primarily pass through programs, flowing to local school districts. Disruptions in federal funding flows would be felt at that level.

Beyond the three largest categories size of federal flows according this expenditure framework drop off significantly. Note that federal funds flowing to the Department of Roads are classified as Cash Funds, since deposits are made to the state fund supporting Roads operations and construction, thus, under current law the connection to the General Fund is much more remote than some other federal funding flows.

The degree of connection to the General Fund budget thus would seem to be greatest with the Human Resources classification of federal funds, primarily Medicaid. The remainder, except for some of the smaller categories, would seem to be somewhat more remotely connected. The fundamental question would then seem to be, in the event of federal fund reductions, to what extent is the state obligated or inclined to pick up the additional cost with state resources. In the case of Medicaid, the cost share structure supersedes that choice and currently it appears the trend for the near future the federal share of Nebraska Medicaid costs will be increasing. In the case of other categories, past experience has shown that this decision becomes a case-by-case decision as a part of the annual budget process. Questions as to whether or not to adjust K-12 school aid via the school aid formula would have to be addressed; or policy decisions would have to be made whether an expanded role for state funded research or broadened involvement in student financial assistance in the higher education area, all in response to diminished federal financial support.

There appears to be no mechanism to reasonably anticipate future federal funding decisions that may alter inflows to the state, or anticipating a state response to such speculation, making any expectation of quantifying additional Cash Reserve fund balances as a safety net impractical.

Table 2 Nebraska State Agencies - Federal Fund Expenditures

Function	Fund	FY2005-06	FY2015-16	% of Total FY15-16	Avg Annual % Change
Human Resources	Federal	1,357,722,751	1,588,541,394	60.58%	1.58%
Higher Education	Federal	254,028,413	501,466,645	19.12%	7.04%
K-12 Education	Federal	275,201,107	373,866,209	14.26%	3.11%
Public Safety	Federal	39,943,050	65,274,535	2.49%	5.03%
Natural Resources	Federal	37,450,607	50,689,276	1.93%	3.07%
Gen Govt	Federal	29,453,137	18,252,890	0.70%	-4.67%
Criminal Justice	Federal	20,501,094	17,555,779	0.67%	-1.54%
Construction	Federal	15,858,818	3,525,800	0.13%	-13.96%
Misc Education	Federal	2,839,606	2,991,487	0.11%	0.52%
Transportation	Federal	4,438,687	114,836	0.00%	-30.61%
State Total	Federal	2,037,437,270	2,622,278,851	100.00%	2.56%

Agency	Function	FY2005-06	FY2015-16	% of Total FY15-16	Avg Annual % Change
DHHS System	Human Resources	1,312,464,938	1,546,218,899	58.96%	1.65%
University of Nebraska	Higher Education	238,619,972	456,783,625	17.42%	6.71%
Education	K-12 Education	275,201,107	373,866,209	14.26%	3.11%
Military Dept	Public Safety	39,149,834	63,337,192	2.42%	4.93%
State Colleges	Higher Education	14,336,131	43,518,027	1.66%	11.74%
Labor	Human Resources	41,261,153	37,016,546	1.41%	-1.08%
Environmental Quality	Natural Resources	28,438,431	32,433,026	1.24%	1.32%
Economic Development	Gen Govt	21,097,136	16,153,848	0.62%	-2.63%
Game & Parks	Natural Resources	4,642,907	7,881,179	0.30%	5.43%
Crime Commission	Criminal Justice	9,925,970	7,332,028	0.28%	-2.98%
State Patrol	Criminal Justice	7,569,131	7,186,311	0.27%	-0.52%
Energy Office	Natural Resources	5,920,632	5,305,157	0.20%	-1.09%
Blind/Visually Impaired	Human Resources	2,900,430	4,212,829	0.16%	3.80%
Agriculture	Natural Resources	2,715,233	3,870,472	0.15%	3.61%
Capital Construction	Construction	15,858,818	3,525,800	0.13%	-13.96%
State Treasurer	Gen Govt	2,138,616	1,687,582	0.06%	-2.34%
Library Commission	Misc Education	1,387,438	1,444,875	0.06%	0.41%
Insurance	Public Safety	372,001	1,331,484	0.05%	13.60%
Postsecond Coord. Comm	Higher Education	1,072,310	1,164,993	0.04%	0.83%
Correctional Services	Criminal Justice	1,808,275	1,152,083	0.04%	-4.41%
All Other		10,556,807	6,856,686	0.26%	-4.22%
State Total		2,037,437,270	2,622,278,851	100.00%	2.56%

Identify current and projected balances of the Cash Reserve Fund;

Table 3 depicts the projected flow by fiscal year for the Cash Reserve Fund as set forth in current law.

Table 4 itemizes fund balances and transaction summaries in and out of the fund since its inception. This table also includes the ending balance as a percent of revenue for the fiscal year shown. Note that the suggestion in the first section of this report that a guideline balance of 16% has only been approached in the last decade.

Since inception and through the middle of the last decade, the ending balance had been sustained at levels well below 10%, however, inspection of Table 1 clearly shows forecast errors in the early 90's were generally smaller, perhaps influencing the perceived need for an appropriate fund balance. As errors in estimates became larger in the early 2000's, cash reserve balances began to grow as a percentage of revenue, reaching 17.2% upon early stages of the "Great Recession" beginning around 2009.

Current estimates through the next biennium project a gradual drift downward as the balance as percent of annual revenue will approach 11%.

Table 3 Cash Reserve Fund

	Actual FY2016-17	Estimated FY2017-18	Estimated FY2018-19	Estimated FY2019-20	Estimated FY20-21
Beginning Balance	730,655,108	637,639,649	637,639,649	630,479,237	630,479,237
Excess of certified forecasts	0	0	0	0	0
To General Fund per current law	0	0	0	0	0
To Nebr Capital Construction Fund (NCCF)	(43,015,459)	0	(7,160,412)	0	(13,276,302)
To Transportation Infrastructure Fund	(50,000,000)	0	0	0	0
2017 - To General Fund	0	0	0	0	0
Ending Balance	637,639,649	637,639,649	630,479,237	630,479,237	617,202,935

Table 4 Cash Reserve Fund – Historical Balances

Fiscal Yr	Beginning Balance	Direct Deposit and Interest	Automatic Transfers	Legislative Transfers	Cash Flow	Ending Balance	Balance as % of revenue
FY1983-84	0	37,046,760	na	0	0	37,046,760	4.7%
FY1984-85	37,046,760	(1,472,551)	na	0	0	35,574,209	4.5%
FY1985-86	35,574,209	227,855	na	(13,500,000)	0	22,302,064	2.7%
FY1986-87	22,302,064	1,428,021	na	0	0	23,730,085	2.7%
FY1987-88	23,730,085	1,654,844	na	(7,700,000)	0	17,684,929	1.7%
FY1988-89	17,684,929	139,000	na	32,600,000	0	50,423,929	4.4%
FY1989-90	50,423,929	113,114	na	(10,500,000)	0	40,037,043	3.5%
FY1990-91	40,037,043	0	na	(8,100,000)	0	31,937,043	2.3%
FY1991-92	31,937,043	0	na	(5,000,000)	0	26,937,043	1.8%
FY1992-93	26,937,043	0	na	(9,500,000)	0	17,437,043	1.1%
FY1993-94	17,437,043	0	3,063,462	7,250,000	0	27,750,505	1.7%
FY1994-95	27,750,505	0	(8,518,701)	1,250,000	0	20,481,804	1.2%
FY1995-96	20,481,804	0	(20,481,804)	18,189,565	0	18,189,565	1.0%
FY1996-97	18,189,565	0	19,740,786	3,032,333	0	40,962,684	2.0%
FY1997-98	40,962,684	0	91,621,018	0	0	132,583,702	6.3%
FY1998-99	132,583,702	0	111,616,422	(98,500,000)	0	145,700,124	6.9%
FY1999-00	145,700,124	0	20,959,305	(24,500,000)	0	142,159,429	5.9%
FY2000-01	142,159,429	0	77,576,670	(49,500,000)	0	170,236,099	6.9%
FY2001-02	170,236,099	0	0	(60,170,000)	0	110,066,099	4.7%
FY2002-03	110,066,099	66,476,446	0	(87,400,000)	(30,000,000)	59,142,545	2.4%
FY2003-04	59,142,545	59,463,461	0	(61,577,669)	30,000,000	87,028,337	3.2%
FY2004-05	87,028,337	8,170,556	108,727,007	(26,758,180)	0	177,167,720	5.8%
FY2005-06	177,167,720	0	261,715,297	(165,266,227)	0	273,616,790	8.2%
FY2006-07	273,616,790	0	259,929,524	(17,458,523)	0	516,087,791	15.1%
FY2007-08	516,087,791	0	191,436,773	(161,978,767)	0	545,545,797	15.6%
FY2008-09	545,545,797	0	116,976,571	(84,330,505)	0	578,191,863	17.2%
FY2009-10	578,191,863	0	0	(110,990,237)	0	467,201,626	14.6%
FY2010-11	467,201,626	0	0	(154,000,000)	0	313,201,626	8.9%
FY2011-12	313,201,626	8,422,528	145,155,092	(33,439,198)	(4,461,676)	428,878,372	11.6%
FY2012-13	428,878,372	0	104,789,781	(154,008,427)	4,461,676	384,121,402	9.5%
FY2013-14	384,121,402	0	285,292,610	49,651,294	0	719,065,306	17.5%
FY2014-15	719,065,306	0	96,721,232	(87,951,112)	0	727,835,426	16.9%
FY2015-16	727,835,426	0	84,599,532	(81,779,850)	0	730,655,108	17.0%
FY2016-17 Est	730,655,108	0	0	(93,015,459)	0	637,639,649	14.5%
FY2017-18 Est	637,639,649	0	0	0	0	637,639,649	14.1%
FY2018-19 Est	637,639,649	0	0	(7,160,412)	0	630,479,237	13.3%
FY2019-20 Est	630,479,237	0	0	0	0	630,479,237	12.5%
FY2020-21 Est	630,479,237	0	0	(13,276,302)	0	617,202,935	11.6%

Analyze the adequacy of current and projected balances of the Cash Reserve Fund in relation to the tax revenue volatility and the risk of a reduction in the amount or value of federal funding or potential areas in which federal funding could be lost;

The first section identifies a level equivalent to about 16% of revenue in the fiscal year as a Cash Reserve Fund balance as coverage for the next cyclical downturn. This safety net would be intended to mitigate the need for budget reductions or revenue increases to reach short term balance.

It should be noted that in the last recession, during the 2009 regular, special and 2010 regular session, \$259 million in cash reserve transfers were used to help balance General Fund budgets through that time period. With that context, a balance of an equivalent of 16% of revenues, or around \$700 million, would seem excessive. However, spending reductions and one time cash fund transfers during the 2009-2010 sessions played a significant role, as did almost \$600 million of federal assistance (that came in the form of general stabilization, education funding assistance, FMAP and child care enhancements) that directly offset General Fund costs.

If federal assistance of this magnitude seems unlikely during future revenue shortfalls/recessions, then a Cash Reserve Fund balance of 16% of revenue may be inadequate when the state first enters a downward revenue cycle. Obviously, what cannot be determined is the depth and duration of revenue weakness that is unable to sustain a current law budget, which also will influence what may be adequate. Thereafter, the size of a draw down to help manage budget imbalances becomes discretionary to be judged along with other options to return to budget balance.

In terms of ongoing federal grants programs the risk of reductions cannot be judged at this time. All will be subject to future actions by the federal government.

Include revenue projections for the ensuing two fiscal years included in the impending biennial budget;

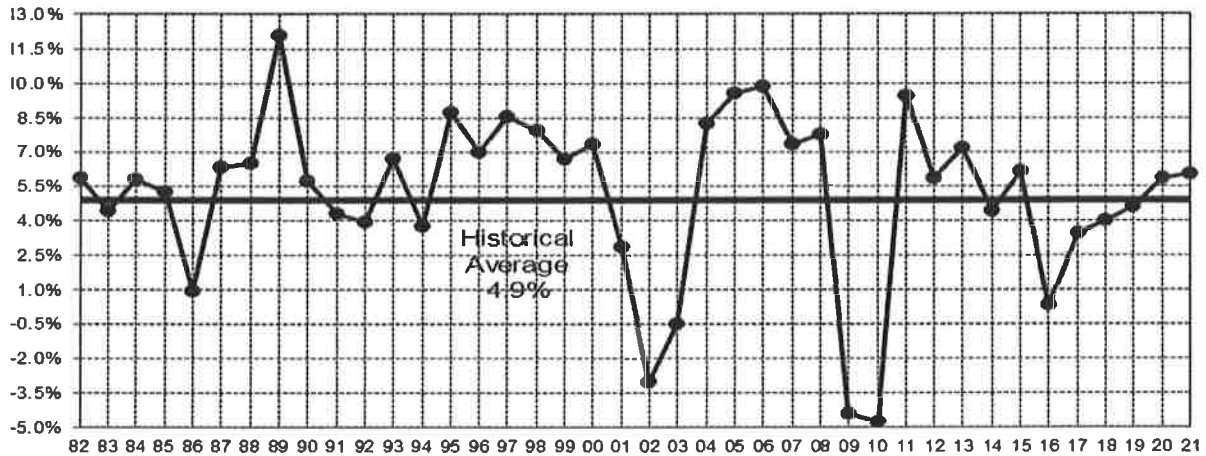
Current official General Fund forecasts have been set for fiscal years 2016-17, 2017-18, and 2018-19.

The revenue forecasts shown in Table 5 for the General Fund are the most current arrived at by the Nebraska Economic Forecasting Advisory Board on October 27, 2016. Revisions to the current and ensuing two fiscal years will occur in February and April 2017. After the end of this fiscal year the ensuing two fiscal years will be revised again in October 2017 and February 2018. After conclusion of FY2017-18, the last fiscal year will be revised again in October 2018, and February and April 2019. For context, a graph of prior year revenue growth and estimates for the current forecasts is included. Note that all percentage growth rates are adjusted for tax rate and base changes. This is a visual reminder of the cyclical nature of General Fund revenue growth over recent years.

Table 5 General Fund Revenue Forecasts

	NEFAB FY2016-17	NEFAB FY2017-18	NEFAB FY2018-19	LFO Prelim FY2019-20	LFO Prelim FY2020-21
Actual/Forecast					
Sales and Use Tax	1,585,000,000	1,640,000,000	1,700,000,000	1,790,000,000	1,890,000,000
Individual Income Tax	2,345,000,000	2,445,000,000	2,575,000,000	2,740,000,000	2,915,000,000
Corporate Income Tax	245,000,000	270,000,000	280,000,000	305,000,000	340,000,000
Miscellaneous receipts	220,000,000	183,000,000	175,000,000	195,000,000	185,000,000
Total General Fund Revenues	4,395,000,000	4,538,000,000	4,730,000,000	5,030,000,000	5,330,000,000
Adjusted Growth					
Sales and Use Tax	4.1%	3.4%	3.5%	4.9%	5.2%
Individual Income Tax	6.5%	4.1%	5.7%	6.4%	6.4%
Corporate Income Tax	-17.6%	9.8%	3.6%	8.2%	10.5%
Miscellaneous receipts	-1.6%	-0.2%	2.7%	4.0%	1.5%
Total General Fund Revenues	3.4%	4.0%	4.6%	5.9%	6.0%
Five Yr Average	4.3%	--	3.7%	--	4.7%

General Fund Revenue Growth
(Adjusted for Tax Rate and Base Changes)



Contain any other recommendations that the Legislative Fiscal Analyst determines are necessary.

The rules for depositing money are clear cut: Revenue to the General Fund in excess of the certified estimate for a fiscal year are automatically deposited to the Cash Reserve Fund. This requirement is set forth in state statutes. This amounts to a separation of what approximates a true surplus in a fiscal year, away from the state spending accounts where it can be saved for some future purpose.

The Cash Reserve Fund is not an expenditure fund. Movement of money from the Cash Reserve requires a bill, amending the fund's statutes to transfer to an expending fund (e.g. the General Fund). Rules as to the purpose of transfers/expenditures do not exist, to date it has been solely a part of the overall budget process, whether to help balance a fiscally stressed budget or to fund discretionary items.

Consideration could be given to creating guidelines for use of the Cash Reserve fund, limiting the size or purpose for which funds should be used.

APPENDIX

CONSENSUS "ONE YEAR AHEAD" FORECASTS

SALES TAX

FISCAL YEAR	ACTUAL NET 000'S of \$'s	BUDBASE OR CERTIFIED YR AHEAD FCST	VARIANCE FROM FORECAST	FORECAST ERROR	ABSOLUTE VALUE OF ERROR	OVER ERROR	UNDER ERROR
FY84-85	300,534	dna					
FY85-86	310,391	dna					
FY86-87	345,158	353,540	-8,382	-2.37%	2.37%	-2.37%	
FY87-88	393,149	370,000	23,149	6.26%	6.26%		6.26%
FY88-89	430,078	400,000	30,078	7.52%	7.52%		7.52%
FY89-90	444,231	449,981	-5,750	-1.28%	1.28%	-1.28%	
FY90-91	547,373	563,000	-15,627	-2.78%	2.78%	-2.78%	
FY91-92	592,442	605,305	-12,863	-2.13%	2.13%	-2.13%	
FY92-93	586,355	607,616	-21,261	-3.50%	3.50%	-3.50%	
FY93-94	648,847	666,458	-17,611	-2.64%	2.64%	-2.64%	
FY94-95	683,852	675,270	8,582	1.27%	1.27%		1.27%
FY95-96	711,002	731,522	-20,520	-2.81%	2.81%	-2.81%	
FY96-97	755,908	756,697	-789	-0.10%	0.10%	-0.10%	
FY97-98	803,805	792,903	10,902	1.37%	1.37%		1.37%
FY98-99	744,651	764,009	-19,358	-2.53%	2.53%	-2.53%	
FY99-00	900,427	887,759	12,668	1.43%	1.43%		1.43%
FY00-01	905,023	940,400	-35,377	-3.76%	3.76%	-3.76%	
FY01-02	918,890	963,000	-44,110	-4.58%	4.58%	-4.58%	
FY02-03	1,028,931	1,043,145	-14,214	-1.36%	1.36%	-1.36%	
FY03-04	1,114,374	1,142,146	-27,772	-2.43%	2.43%	-2.43%	
FY04-05	1,231,011	1,172,491	58,520	4.99%	4.99%		4.99%
FY05-06	1,263,679	1,251,982	11,697	0.93%	0.93%		0.93%
FY06-07	1,303,826	1,266,446	37,380	2.95%	2.95%		2.95%
FY07-08	1,321,867	1,293,053	28,814	2.23%	2.23%		2.23%
FY08-09	1,326,161	1,358,932	-32,771	-2.41%	2.41%	-2.41%	
FY09-10	1,289,797	1,343,559	-53,762	-4.00%	4.00%	-4.00%	
FY10-11	1,372,784	1,365,000	7,784	0.57%	0.57%		0.57%
FY11-12	1,436,909	1,424,967	11,942	0.84%	0.84%		0.84%
FY12-13	1,474,943	1,479,906	-4,963	-0.34%	0.34%	-0.34%	
FY13-14	1,524,794	1,499,996	24,798	1.65%	1.65%		1.65%
FY14-15	1,535,420	1,536,422	-1,002	-0.07%	0.07%	-0.07%	
FY15-16	1,528,023	1,614,273	-86,250	-5.34%	5.34%	-5.34%	
FY16-17e	1,585,000	1,607,111	-22,111	-1.38%	1.38%	-1.38%	
	Std Dev			3.04%	1.77%		
	Median			-1.28%	2.37%		
	AVG ERROR 84-85 TO 16-17			-0.44%	2.51%	-2.4%	2.7%

INDIVIDUAL INCOME

FISCAL YEAR	ACTUAL NET 000'S of \$'s	BUDBASE OR CERTIFIED FORECAST	VARIANCE FROM FORECAST	FORECAST ERROR	ABSOLUTE VALUE OF ERROR	OVER ERROR	UNDER ERROR
FY84-85	324,586	dna					
FY85-86	357,181	dna					
FY86-87	365,762	340,000	25,762	7.58%	7.58%		7.58%
FY87-88	437,742	380,000	57,742	15.20%	15.20%		15.20%
FY88-89	479,732	417,773	61,959	14.83%	14.83%		14.83%
FY89-90	501,134	467,812	33,322	7.12%	7.12%		7.12%
FY90-91	609,431	590,900	18,531	3.14%	3.14%		3.14%
FY91-92	658,634	652,878	5,756	0.88%	0.88%		0.88%
FY92-93	690,351	688,000	2,351	0.34%	0.34%		0.34%
FY93-94	722,361	738,000	-15,639	-2.12%	2.12%	-2.12%	
FY94-95	746,718	783,000	-36,282	-4.63%	4.63%	-4.63%	
FY95-96	846,547	825,189	21,358	2.59%	2.59%		2.59%
FY96-97	944,117	863,000	81,117	9.40%	9.40%		9.40%
FY97-98	981,644	895,272	86,372	9.65%	9.65%		9.65%
FY98-99	1,078,523	1,028,363	50,160	4.88%	4.88%		4.88%
FY99-00	1,180,363	1,130,000	50,363	4.46%	4.46%		4.46%
FY00-01	1,233,364	1,229,295	4,069	0.33%	0.33%		0.33%
FY01-02	1,159,811	1,339,309	-179,498	-13.40%	13.40%	-13.40%	
FY02-03	1,129,422	1,338,700	-209,278	-15.63%	15.63%	-15.63%	
FY03-04	1,249,890	1,307,056	-57,166	-4.37%	4.37%	-4.37%	
FY04-05	1,400,077	1,262,599	137,478	10.89%	10.89%		10.89%
FY05-06	1,545,338	1,439,950	105,388	7.32%	7.32%		7.32%
FY06-07	1,650,895	1,517,377	133,518	8.80%	8.80%		8.80%
FY07-08	1,726,145	1,630,350	95,795	5.88%	5.88%		5.88%
FY08-09	1,600,418	1,750,074	-149,656	-8.55%	8.55%	-8.55%	
FY09-10	1,514,830	1,675,000	-160,170	-9.56%	9.56%	-9.56%	
FY10-11	1,735,209	1,630,000	105,209	6.45%	6.45%		6.45%
FY11-12	1,822,884	1,758,137	64,747	3.68%	3.68%		3.68%
FY12-13	2,101,912	1,862,137	239,775	12.88%	12.88%		12.88%
FY13-14	2,060,759	2,039,395	21,364	1.05%	1.05%		1.05%
FY14-15	2,205,464	2,207,703	-2,239	-0.10%	0.10%	-0.10%	
FY15-16	2,221,089	2,298,471	-77,382	-3.37%	3.37%	-3.37%	
FY16-17e	2,345,000	2,427,203	-82,203	-3.39%	3.39%	-3.39%	
	Std Dev			7.61%	4.55%		
	Median			3.14%	5.88%		
	AVG ERROR 84-85 TO 16-17			2.33%	6.53%	-6.50%	6.50%

CORPORATE INCOME

FISCAL YEAR	ACTUAL NET 000'S of \$'s	BUDBASE OR CERTIFIED FORECAST	VARIANCE FROM FORECAST	FORECAST ERROR	ABSOLUTE VALUE OF ERROR	OVER ERROR	UNDER ERROR
FY84-85	48,959	dna					
FY85-86	54,559	dna					
FY86-87	67,424	72,000	-4,576	-6.36%	6.36%	-6.36%	
FY87-88	73,781	65,000	8,781	13.51%	13.51%		13.51%
FY88-89	80,624	50,000	30,624	61.25%	61.25%		61.25%
FY89-90	71,948	70,000	1,948	2.78%	2.78%		2.78%
FY90-91	81,948	54,800	27,148	49.54%	49.54%		49.54%
FY91-92	103,617	100,380	3,237	3.22%	3.22%		3.22%
FY92-93	102,755	105,000	-2,245	-2.14%	2.14%	-2.14%	
FY93-94	113,143	110,000	3,143	2.86%	2.86%		2.86%
FY94-95	123,924	118,000	5,924	5.02%	5.02%		5.02%
FY95-96	126,801	120,422	6,379	5.30%	5.30%		5.30%
FY96-97	137,338	131,000	6,338	4.84%	4.84%		4.84%
FY97-98	142,150	133,230	8,920	6.70%	6.70%		6.70%
FY98-99	135,034	138,000	-2,966	-2.15%	2.15%	-2.15%	
FY99-00	140,022	143,000	-2,978	-2.08%	2.08%	-2.08%	
FY00-01	138,040	140,952	-2,912	-2.07%	2.07%	-2.07%	
FY01-02	107,628	148,913	-41,285	-27.72%	27.72%	-27.72%	
FY02-03	111,597	133,700	-22,103	-16.53%	16.53%	-16.53%	
FY03-04	167,429	120,008	47,421	39.52%	39.52%		39.52%
FY04-05	198,380	149,271	49,109	32.90%	32.90%		32.90%
FY05-06	262,295	185,950	76,345	41.06%	41.06%		41.06%
FY06-07	213,027	218,677	-5,650	-2.58%	2.58%	-2.58%	
FY07-08	232,852	241,200	-8,348	-3.46%	3.46%	-3.46%	
FY08-09	198,484	214,490	-16,006	-7.46%	7.46%	-7.46%	
FY09-10	154,332	169,814	-15,482	-9.12%	9.12%	-9.12%	
FY10-11	154,945	185,000	-30,055	-16.25%	16.25%	-16.25%	
FY11-12	234,266	200,000	34,266	17.13%	17.13%		17.13%
FY12-13	275,563	230,000	45,563	19.81%	19.81%		19.81%
FY13-14	306,591	265,000	41,591	15.69%	15.69%		15.69%
FY14-15	346,477	263,000	83,477	31.74%	31.74%		31.74%
FY15-16	307,670	329,124	-21,454	-6.52%	6.52%	-6.52%	
FY16-17e	245,000	310,000	-65,000	-20.97%	20.97%	-20.97%	
	Std Dev			20.59%	15.48%		
	Median			2.86%	7.46%		
	AVG ERROR 84-85 TO 16-17			7.34%	15.43%	-9.00%	20.80%

MISCELLANEOUS RECEIPTS

FISCAL YEAR	ACTUAL NET 000'S of \$'s	BUDBASE OR CERTIFIED FORECAST	VARIANCE FROM FORECAST	FORECAST ERROR	ABSOLUTE VALUE OF ERROR	OVER ERROR	UNDER ERROR
FY84-85	109,272	dna					
FY85-86	112,105	dna					
FY86-87	108,010	112,581	-4,571	-4.06%	4.06%	-4.06%	
FY87-88	111,426	109,000	2,426	2.23%	2.23%		2.23%
FY88-89	143,013	120,664	22,349	18.52%	18.52%		18.52%
FY89-90	135,396	123,090	12,306	10.00%	10.00%		10.00%
FY90-91	128,326	125,900	2,426	1.93%	1.93%		1.93%
FY91-92	135,716	134,664	1,052	0.78%	0.78%		0.78%
FY92-93	145,201	137,371	7,830	5.70%	5.70%		5.70%
FY93-94	169,402	148,090	21,312	14.39%	14.39%		14.39%
FY94-95	150,996	153,631	-2,635	-1.72%	1.72%	-1.72%	
FY95-96	152,381	157,156	-4,775	-3.04%	3.04%	-3.04%	
FY96-97	172,241	167,287	4,954	2.96%	2.96%		2.96%
FY97-98	177,852	172,430	5,422	3.14%	3.14%		3.14%
FY98-99	165,629	172,538	-6,909	-4.00%	4.00%	-4.00%	
FY99-00	183,112	165,589	17,523	10.58%	10.58%		10.58%
FY00-01	180,435	170,054	10,381	6.10%	6.10%		6.10%
FY01-02	179,180	180,626	-1,446	-0.80%	0.80%	-0.80%	
FY02-03	186,450	207,832	-21,382	-10.29%	10.29%	-10.29%	
FY03-04	187,033	162,765	24,268	14.91%	14.91%		14.91%
FY04-05	207,726	191,118	16,608	8.69%	8.69%		8.69%
FY05-06	280,875	214,376	66,499	31.02%	31.02%		31.02%
FY06-07	240,583	214,395	26,188	12.21%	12.21%		12.21%
FY07-08	225,298	224,583	715	0.32%	0.32%		0.32%
FY08-09	232,405	208,250	24,155	11.60%	11.60%		11.60%
FY09-10	245,721	258,302	-12,582	-4.87%	4.87%	-4.87%	
FY10-11	236,717	241,459	-4,742	-1.96%	1.96%	-1.96%	
FY11-12	201,829	207,995	-6,166	-2.96%	2.96%	-2.96%	
FY12-13	199,941	195,023	4,918	2.52%	2.52%		2.52%
FY13-14	225,265	216,296	8,969	4.15%	4.15%		4.15%
FY14-15	217,739	213,375	4,364	2.05%	2.05%		2.05%
FY15-16	251,199	231,988	19,211	8.28%	8.28%		8.28%
FY16-17e	220,000	222,924	-2,924	-1.31%	1.31%	-1.31%	
	Std Dev			8.20%	6.49%		
	Median			2.52%	4.06%		
	AVG ERROR 84-85 TO 16-17			4.42%	6.68%	-3.50%	8.20%